

## PATENT ABSTRACTS OF JAPAN

(2)-(3)

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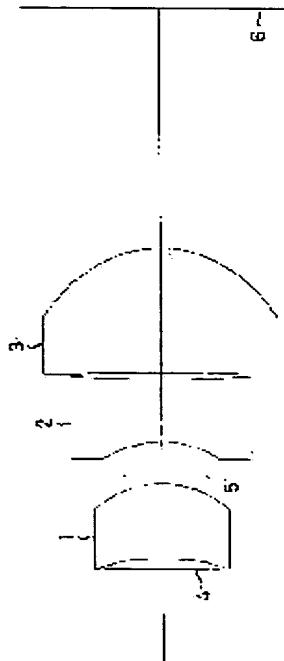
(21)Application number : 2001-015939 (71)Applicant : ENPLAS CORP  
 (22)Date of filing : 24.01.2001 (72)Inventor : SAITO TOMOHIRO

## (54) IMAGING LENS

## (57)Abstract:

PROBLEM TO BE SOLVED: To provide an imaging realizing a short focus while securing a wide viewing angle and maintaining desired optical performance, excellently compensation each aberration and easily manufactured.

SOLUTION: This imaging lens is obtained by successively arranging a 1st lens 1 where a concave surface is formed on an object side near an optical axis and which has positive power, a diaphragm, a 2nd lens 2 which has negative power and a 3rd lens 3 which has positive power from the object side. The ratio of the focal distance  $f_1$  of the 1st lens 1 to the focal distance  $f_3$  of the 3rd lens 3 is  $\leq 1.2$  and  $\geq 0.8$ .



## LEGAL STATUS

[Date of request for examination]

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[Patent number]

[Date of registration]

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[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]





(5)

(6)

7 で、この第2実施例は前記図1に示す構成の複数レンズ  
であり、本実施例においては、第1レンズ1および第3  
レンズ3をシングルオーバーライン系樹脂により形成するこ  
とで、第1レンズ1と第2レンズ2との間に約5の位  
 $f_1 = 3.93\text{mm}$ ,  $f_1 = 2.90\text{mm}$ ,  $f_1 = -1.90\text{mm}$ ,  $f_1 = 2$   
8.2 mm

面  
曲率半径r  
K  
C  
CCD面

1 (光量制限板)

0.000 0.1500

2 (第1レンズ第1面)

-5.069 1.0500

3 (第1レンズ第2面)

-1.286 0.0000

4 (枚り)

0.000 0.6200

5 (第2レンズ第1面)

-1.271 0.7500

6 (第2レンズ第2面)

19.299 0.1000

7 (第3レンズ第1面)

11.587 1.6800

8 (第3レンズ第2面)

-1.669 3.8049

9 (CCD面)

0.000 0.1500

10 56.0

11.54

1.54

56.0

2.736839e-001

-1.149266e-002

-3.445309e-002

-8.680906e-001

1.958903e-002

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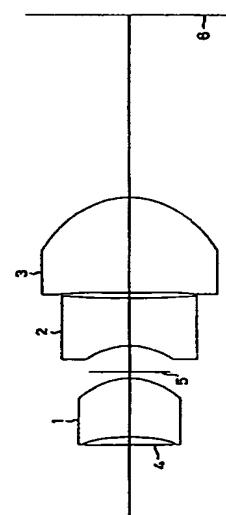
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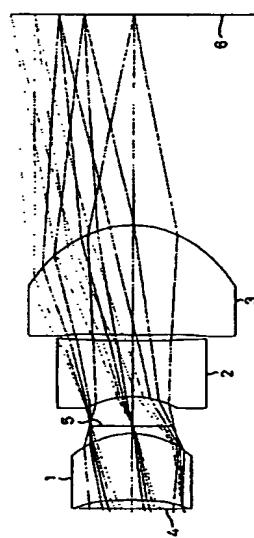
6.2

(7)

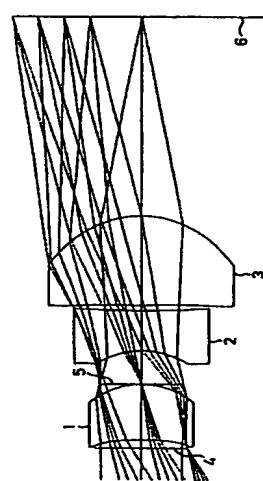
[図1]



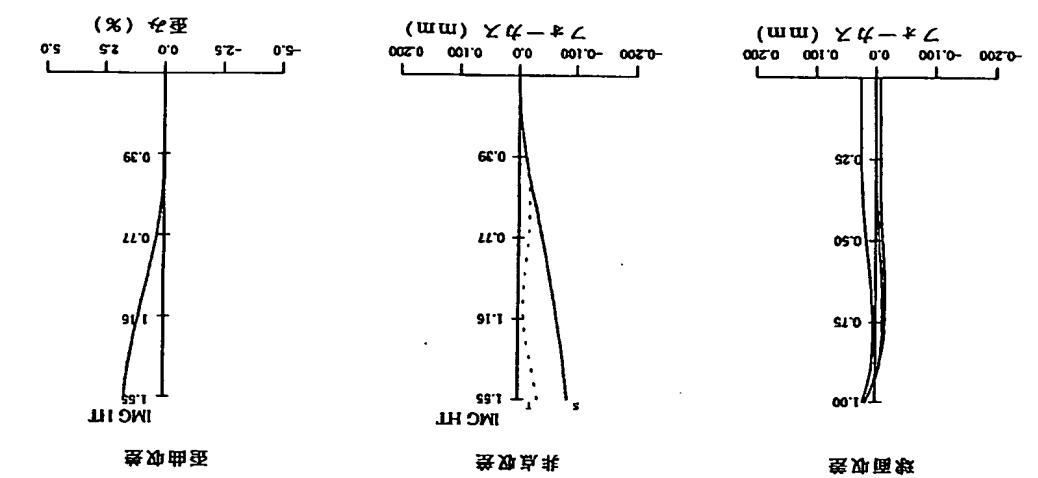
[図2]



[図4]

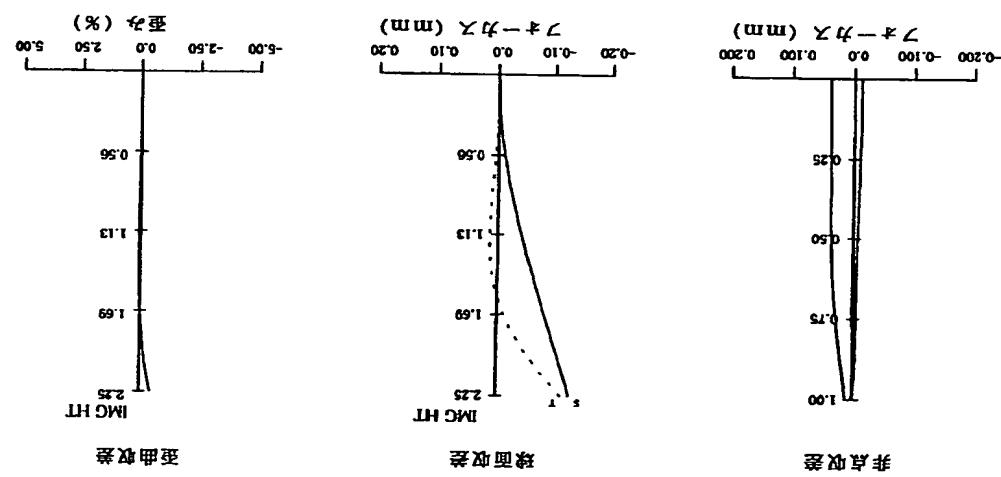


[図3]



(9)

[图5]



(10)

